Bruhat Bangalore Mahanagara Palike
Excecutive Engineer Yelahanka Project Division

Name of Work: Providing Chain link fencing for CA Land at 2nd phase Dr. Shivaram Karanth Nagar behind JNC Hostel and Near SWD in ward no. 05

				Estimate cost, Rs			70.00 Lakhs	
DETAILED QUANTITY CALCULATION & COST ESTIMATE								
Description	Unit	No.	Length, m	Width, m	Depth, m	Quantity	Rate, Rs	Amount, Rs
Civil Works								
1. **Clearing and grubbing road land** including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness complete as per specifications. I. By Manual Means: A. In area of light jungle. MORTH Specification No. 201. (SOR 2016-2017, Page 136, Item No 18.13)								
Basic Rate	48878.00							
Add Area weightage of 8%	3910.24							
Sub Total	52788.24							
	Ha	1	40.00	70.00		2800.00		
		1	55.00	30.00		1650.00		
						0.45	52788.24	23491.00
Excavation in Soil with Dozer 2. Excavation for road way in all types of soil by mechanical means including cutting and loading the earth to site of embankment including trimming bottom and side slopes in accordance with requirements of lines, grades and cross sections complete as per specifications. MORTH Specification No. 201. (SOR 2016-2017, Page 143, Item No 19.11)								
Basic Rate	68.00							
Add Area weightage of 8%	5.44							
Sub Total	73.44							
Lead 15 Kms	116.00							
Total	189.44							
Leveling and levelling	Cum							
		1	40.00	70.00	0.20	560.00		
		1	54.00	27.00	0.10	145.80		
Drain Depth		1	41.00	0.50	0.40	8.20		
		1	70.00	0.50	0.40	14.00		
Boundary station		4	1.00	1.00	1.00	4.00		
		4	2.00	1.00	1.00	8.00		
Grass/Dust grass		1	0.65	0.50	0.60	0.20		
Tree/water		4	0.50	0.50	0.60	0.60		
Tree		1	0.50	0.50	0.60	0.15		
Cycle/Twist bike		1	0.50	0.50	0.60	0.15		
Air weighted rower		1	0.50	0.50	0.60	0.15		
Elliptical cross trainer		1	0.50	0.50	0.60	0.15		
Twister		1	0.50	0.50	0.60	0.15		
Health Walker		2	0.50	0.50	0.60	0.30		
Tree		1	1.50	1.50	0.60	1.35		
Chain Link Fencing								
Fence		1	30.00	1.00	0.70	21.00		
Gate		1	41.00	0.80	0.70	22.96		
Length		1	70.00	0.90	0.70	44.10		
Fence		1	90.00	1.00	0.70	63.00		
						894.26	189.44	169408.00

Description	Unit	No.	Length, m	Width, m	Depth, m	Quantity	Rate, Rs	Amount, Rs
Wet Mix Macadam - KSRRB M400-17. Providing, laying, spreading and compacting crushed stones aggregate to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 (P.No.158								
Basic Rate	1668.00							
Add Area weightage of 8%	133.44							
Sub Total	1801.44							
The Walking Track - alround								
	Cum	1	220.00	2.50	0.20	110.00		
						110.00	1801.44	198159.00
: Providing and laying in position **plain cement concrete of mix 1:4:8** with OPC cement @ with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well in foundation, including cost of all materials, labour, HOM of machinery, curing complete as specifications. Specification No. KBS 4.1,4.2 (BCSR 2016-2017, Page 12, Item No 4.3)								
Basic Rate	4867.00							
Add Area weightage of 8%	389.36							
Sub Total	5256.36							
Walking Track	Cum	2	220.00	0.20	0.15	13.20		
Toilet equipment		1	54.00	0.18	0.15	1.46		
Observation Platform		1	15.45	5.95	0.15	13.79		
		1	8.30	2.10	0.15	2.61		
Steps		1	1.50	1.50	0.15	0.34		
Chain Link Fencing								
Gate		1	30.00	0.90	0.15	4.05		
		1	41.00	0.75	0.15	4.61		
		1	40.00	0.75	0.15	4.50		
		1	30.00	0.90	0.15	4.05		
		1	90.00	0.75	0.15	10.13		
Distribution station		4	1.00	1.00	0.15	0.60		
		4	2.00	1.00	0.15	1.20		
						60.54	5256.36	318203.00
: Providing and laying in position **plain cement concrete of mix M20** withOPC cement @ with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates with superplastesisre @ 3lts conforming to IS9103-1999Reffirmed machine mixed exceeding thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, roaming walls, return walls, walls(any thickness) including attached plasters, columns, piers, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor plain window cills, fillets etc, including cost of all materials, labour HOM of machinery, curing, complete as per specifications. Specification. No. KBS 4.1,4.6, No. KBS 4.1,4.6, (BCSR 2016-2017, Page Item No 4.10								
Basic Rate	6011.00							
Add Area weightage of 8%	480.88							
Sub Total	6491.88							
	Cum							
Distribution station		4	1.00	1.00	0.60	2.40		
		4	2.00	1.00	0.60	4.80		
Chest chest press		1	0.65	0.50	0.60	0.20		
Chest counter		4	0.50	0.50	0.60	0.60		
Seat		1	0.65	0.50	0.60	0.20		
Seat for Total bike		1	0.65	0.50	0.60	0.20		
Seat weighted rower		1	0.65	0.50	0.60	0.20		
Seated cross trainer		1	0.65	0.50	0.60	0.20		
Seat spinner		1	0.50	0.50	0.60	0.15		
Seat Elliptic Walker		2	0.50	0.50	0.60	0.30		
						9.23	6491.88	59888.00

Description	Unit	No.	Length, m	Width, m	Depth, m	Quantity	Rate, Rs	Amount, Rs
Providing and laying/fixing cement base, precast, pre polished cement concrete, **designer tiles 25mm** thick for flooring conforming to IS 1237 heavy duty tiles for flooring, treads of steps and landing, laid on bed of 12mm thick cement mortar 1:3 mis finished with flush pointing using white cement, including cost of materials, including cutting, griding the edge to half/full round wherever required, labour, curing complete as per specification (BCSR 2016-2017, Page 109, Item No 14.62)								
Basic Rate	1085.00							
Add Area weightage of 8%	86.80							
Sub Total	1171.80							
Designs	**Sqm**	1	15.45	5.95		91.93		
						91.93	1171.80	107721.00
Providing and laying **heavy duty cobble stones 60mm thick** interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and TOM of machineries complete as per specifications. Specification No. KBS. BCSR 2016-2017, Page 101, Item No 14.6)								
Basic Rate	912.00							
Add Area weightage of 8%	72.96							
Sub Total	984.96							
The Walking Track - base								
Walking Track	**Cum**	1	220.00	2.30		506.00		
						506.00	984.96	498390.00
Providing and fixing pre cast solid cement concrete **kerb stones** made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges machinery, loading and unloading, lead and lift, transportation ete.,complete BCSR 2016-2017, Page 182, Item No 24.1)								
Basic Rate	313.00							
Add Area weightage of 8%	25.04							
Sub Total	338.04						-	
The equipment	Nos	1	54.00			54.00		
Designs		2	15.45			30.90		
		2	4.70			9.40		
The Walking Track		2	220.00			440.00		
					A	534.30		
Deduct					B	1187.00	338.04	401254.00
Painting **two coats** after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. BCSR Chapter 8. BCSR 2016-2017, Page 182, Item No 24.1)								
Basic Rate	60.00							
Add Area weightage of 8%	4.80							
Sub Total	64.80							
The Walking Track	**Sqm**	2	220.00	0.40		176.00		
Designs		2	15.45	0.40		12.36		
		2	4.70	0.40		3.76		
						192.12	64.80	12450.00
Providing and constructing **granite / trap / basalt size stone masonry** in foundation with cement mortar 1 : 6 stone hammerd dressed in courses not less than 20 ems high, bond stones at 10 nos in each course including cost of materials, labour, curing complete as per specifications. KBS BCSR 2016-2017, Page 23, Item No 5.5)								
Basic Rate	4187.00							
Add Area weightage of 8%	334.96							

Description	Unit	No.	Length, m	Width, m	Depth, m	Quantity	Rate, Rs	Amount, Rs
Sub Total	4521.96							
	Cum							
Iron Chain Link Fencing								
		1	30.00	0.90	0.60	16.20		
		1	41.00	0.60	0.45	11.07		
		1	40.00	0.60	0.60	14.40		
		1	30.00	0.90	0.90	24.30		
		1	90.00	0.90	0.90	72.90		
		1	1.50	1.50	0.45	1.01		
						139.88	4521.96	632544.00
Providing and constructing granite / trap / basalt size stone masonry in superstructure with cement mortar 1:6 , edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, scaffolding, curing complete as per specifications. KBS 5.1.13 (SOR 2016-2017, Page 23, Item No 5.12)								
Basic Rate	5249.00							
Add Area weightage of 8%	419.92							
Sub Total	5668.92							
	Cum							
Iron Chain Link Fencing								
		1	30.00	0.60	0.90	16.20		
		1	41.00	0.45	0.45	8.30		
		1	40.00	0.45	0.45	8.10		
		1	30.00	0.45	0.60	8.10		
		1	90.00	0.60	0.60	32.40		
		1	1.50	1.35	0.20	0.41		
		1	1.50	0.90	0.20	0.27		
		1	1.50	0.45	0.20	0.14		
		-100	0.45	0.45	0.45	-9.11		
						64.80	5668.92	367347.00
Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (SOR 2016-2017, Page 113, Item No 15.1)							-	
Basic Rate	97.00							
Add Area weightage of 8%	7.76							
Sub Total	104.76							
	Sqm							
Iron Chain Link Fencing								
		1	30.00	0.90		27.00		
		1	41.00	0.45		18.45		
		1	40.00	0.45		18.00		
		1	30.00	0.90		27.00		
		1	90.00	0.90		81.00		
		2	0.90	0.60		1.08		
						172.53	104.76	18075.00
Construction of Embankment with Material Gravel/Murrum								
Construction of embankment with approved material Gravel /Murrum with all lifts including transporting to site, spreading, grading to required slope and compacting to meet requirement complete as per specifications, including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density. MORTH Specification No. 305. (SOR 2016-2017, Page 148, Item No 19.60)								
Basic Rate	302.00							
Add Area weightage of 8%	24.16							
Sub Total	326.16							
	Cum							
		1	15.45	4.70	0.40	29.05		

Description	Unit	No.	Length, m	Width, m	Depth, m	Quantity	Rate, Rs	Amount, Rs
		1	40.00	40.00	0.45	720.00		
		1	40.00	30.00	0.80	960.00		
		1	54.00	27.00	0.45	656.10		
						2365.15	326.16	771417.00
: Providing and laying in position **plain cement concrete of mix 1:2:4** with cement@ with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 ems. thick, well in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, complete as per specifications.(BCSR 2016-2017, Page 12, Item No 4.6)								
Basic Rate	5441.00							
Add Area weightage of 8%	435.28							
Sub Total	5876.28							
	Cum							
		1	30.00	0.60	0.10	1.80		
		100	0.45	0.45	0.45	9.11		
		1	41.00	0.45	0.10	1.85		
		1	40.00	0.45	0.10	1.80		
		1	30.00	0.45	0.10	1.35		
		1	90.00	0.45	0.10	4.05		
		3	1.50	0.45	0.05	0.10		
						20.06	5876.28	117871.00
8.1. **Back filling** behind abutment, wing wall and return wall complete as per drawing Technical Specification complete as per specifications. A. Granular material MORTH Specification 2016-2017, Page 225, Item No 28.11)								
Basic Rate	524.00							
Add Area weightage of 8%	41.92							
Sub Total	565.92							
	Cum	1	41.00	0.20	0.45	3.69		
		1	40.00	0.20	0.45	3.60		
		1	30.00	0.20	1.50	9.00		
		1	90.00	0.20	0.60	10.80	-	
						27.09	565.92	15331.00
chain link fencing 50mm size of 8 guage properly stretched between existing rectangular lined with suitable bolts & nuts, the free ends shall be welded to the pole and block pipe at top as required including cost of all materials, labour, lead and lifts and as per the directions of Engineer-in-charge of work including two coats of approved quality paint over one coat of shop paint 2016-2017, Page 262, Item No 37.3)								
Basic Rate	659.00							
Add Area weightage of 8%	52.72							
Sub Total	711.72							
	Sqm							
		1	38.00		1.80	68.40		
		1	40.00		1.80	72.00		
		1	30.00		1.80	54.00		
		1	90.00		1.80	162.00		
						356.40	711.72	253658.00
and fixing **M.S. Rectangular poles** made out of 2 equal angles of 65x65x6 mm welded and fixed in CC (1 :2:4) WITH 2 NOS 16mm dia M.S. hold fast rods each of length 25 ems. cost of all materials cutting, bending scaffolding wherever necessary, nicely finishing the joints with all lead lifts and as per the directions of the Engineer-in - charge of the work and providing 2 coats of approved quality paint over one coat of shop painting (excluding cost of and concrete) 2016-2017, Page 262, Item No 37.2)									

Description	Unit	No.	Length, m	Width, m	Depth, m	Quantity	Rate, Rs	Amount, Rs
Basic Rate	819.00							
Add Area weightage of 8%	65.52							
Sub Total	884.52							
	m	100	2.40			240.00		
						240.00	884.52	212285.00
Providing and fixing M.S. Block pipe of 38mm dia, of heavy guage of 14 including removing the bends, cutting the pipe, and fixing pipe in between the existing two verticle poles (M.S. rectangular poles) and post welding the chain link with M.S. block pipe including cost of all materials wastage in cutting, and scaffolding wherever necessary with all lead and lift as directed by the Engineer-in-charge of work etc., complete including two coats of approved quality paint over one coat of shop paint SOR 2016-2017, Page 262, Item No 37.4)								
Basic Rate	324.00							
Add Area weightage of 8%	25.92							
Sub Total	349.92							
	m							
		3	38.00			114.00		
		3	40.00			120.00		
		3	30.00			90.00		
		3	90.00			270.00		
						594.00	349.92	207853.00
Providing and filling sand in foundation upto plinth to required depth for sub soil treatment including watering ramming with all lead and lift complete as per specifications, specification. No. KBS 2.10.2 SOR 2016-2017, Page 6, Item No 2.13)								
Basic Rate	2135.00							
Add Area Weightage @ 8%	170.80							
Sub Total	2305.80							
	Cum							
		1	15.00	12.00	0.080	14.40		
						14.40	2305.80	33204.00
Supplying, providing and erecting in position Hot dip galvanised Gate. Using 72 X 72 X 4.8mm Sq. GI Pipe Frame with Top pipe bending in heavy duty hydraulic press with sand packing and hot bending to required radius as per drawing profile, 20mm hot dip galvanised sq. rod for verticals at 150mm c/c, as shown in the drawing including providing hot dip galvanised forged ornamental design in between sq. rods and bends at top, middle and bottom. Intermediate supports of 75X12 mm and 50X6 mm arch bend of hot dip galvanised flats. The work is inclusive of throughing GI flat GI sq. rods, placing, welding all the joints including grinding, finishing metal putty, painting two coats enamel painting. The rate is inclusive of all materials like GI sq. pipe, GI sq. rods, GI forged designs etc., heavy duty hinges are made out of 75mm solid sq. block assembled with 20mm dia bearing in three places for each flop. Heavy Duty locking arrangements at tow places including cost of labour, painting, erecting charges using hoist crane with all lead and lift, loading, transportation, unloading, scaffolding charges and all other incidental charges for successful completion of the work as per directions of the Engineer-in-charge of Divisional Unga Rate)								
Data Rate	12475.03							
	Sqm	1	3.00	2.40		7.20		
						7.20	12475.03	89821.00
Supply and fixing of special Multiplay system. This system compromises of 3 slides which are made of virgin LLDPEwhich is of size 1. Two 1200 mm wavey slide -2238mm x 920 mm x 2382 mm,both the slides have got an in built exit panel which is must as it provides extra safety to children . 2. One 1500 mm slide - 2546 mm x 1623 mm x 2490 mm, the slide has got a exit rod which is amust as it provides extra safety for children. The 1500 mm slide has a rectangular deck of size 959 mm x 650 mm x 80 mm. Material: Virgin LLDPE which is UV								
Data Rate	536841.00							
	Each	1				1.00		

Description	Unit	No.	Length, m	Width, m	Depth, m	Quantity	Rate, Rs	Amount, Rs
						1.00	536841.00	536841.00
Supply and fixing of special Multiplay system. This system compromises of - a B ladder Climber which is made up of Galvanized steel which is of size 635 mm x 582 mm x 2598 mm and is connected to exit door which is also made up of galvanized steel which is of size 990 mm x 32 mm x 1454 mm. It consists of Rock climber which has climbing pegs size 150 mm x 75 mm x 98 mm which is bolted on a plate which is made of steel and of size 700 mm x 20 mm x 1680 mm. The system has a tunnel which connects the rock climber deck and the B-ladder								
Data Rate	669173.00							
	Each	1				1.00		
						1.00	669173.00	669173.00
Providing and fixing granite benches as per design, specification and fixing as per the directions of the engineer in charge.								
Data Rate	10550.00							
	Unit	10				10.00		
						10.00	10550.00	105500.00
Supply and fixing of Seated Chest Press. Metal: All tubular steel of 2.Smm thikness are galvanized and z inc dipped. Joints are Robotic welded. All welded joints t1H • scalloped as necessary and welded to an approved MIG process. All welds an• 111 csed off removing all sharp edges and burrs. Zinc Primer Paint is applied at all the w 11lt1ing points prior to finishing. All metal parts are powder coated using AKZO Nobel (11 ca t Wall powder to the thickness of 80-120 microns. All metal parts are tested in rn 1r a lt spray machine that uses a 5% NaCl solution in accordance to 1507227 to speed up corrosion for 3000 hrs. Rubber: High quality grip rubber is used for the handle!,,Bearings: Maintenance-free ball bearings. Scope of delivery: 1completely Prt' ,ssembled equipment modules. Maintenance: Maintain according to EN 166630 and the maintenance guide. Safety: All products must be tested and certified to me-(•IEN16630 safety standards with GS test mark. The EN 16630,certificates must be issued by a reputed notified international certifying agency such as IPEMA, 1UV, CPSC, or SGS only. The GS Mark-EN16630 Certificates must be in the name of tendering party and not any 3rd party.All products must clearly display the GS inark as has been issued in the EN16630 safety certificates. All products must carry n GS mark :in it.. Size_ L x W x H): 1955 x 733 x 2058 mm. Weight : 86.6 Kg Safety Arc:.1: 5545 x 4470 mm Capacity_2 Persons.								
Data Rate	230000.00							
	Unit	1				1.00		
						1.00	230000.00	230000.00
Supply and fixing of Self Weighted Rower. Metal: All tubular steel of 2.Smm thit.kness are galvaniied and zinc dipped. Joints are Robotic welded. All welded joiflts arc • scalloped as necessary and welded to an approved MIG process. All welds arc dressed off removing all sharp edges and burrs. Zinc Primer Paint is applied at all the welding points prior to finishing. All metal parts are powder coated using AKZO Nobel-Great Wall powder to the thickness of 80-120 microns. All metal parts are tested in our sa lt S'PI,ray machine.that uses a 5% NaCl solution in accordance to 1507227 to speed up3 c_6rrosion for 3000 hrs. Colour RAL 5019 Blue and RAL 1014 Beige Rubber: High quality grip rubber is used for the handles. Bearings: Maintenance-free ball bearings. Scope of delivery: Completely pre-assembled equipment modules. Maintain according to EN 16630 and the maintenance guide. Safety:All products must be tested and certified to meet EN16630 safety standards only by a reputed notified international certifying agency such as IPEMA, TUV, CPSC, or SGS. The GS Mork• EN16630 Certificates must be in the name of tendering party and not any 3rd p::11 ty All products must carry a GS mark on it.. Size_L x W x H}: 1390 x 805 x 1100 mm. Weight: 42.4 Kg Safety Area: 3790 x 3205 mm Capacity_1 Person.								
Data Rate	165000.00							
	Unit	1				1.00		
						1.00	165000.00	165000.00

Administrative Approval
Accorded For Rs.70.00lakhs
Head of A/C P-3119
EER NO : 57/17-18. Dt: 9/10/17

E.E. (Project)
9/x